We claim:

We claim:

- 1 1. A machine-readable medium that provides instruction, which when executed by a set
- of processors, cause said set of processors to perform operations comprising:
- 3 receiving a plurality of signals at a first clock rate;
- 4 synchronizing the plurality of signals to a second clock rate; and
- 5 deframing the plurality of signals.
- 1 2. The machine-readable medium of claim 1 wherein the second clock rate is greater
- 2 than twice the first clock rate.
- 1 3. The machine-readable medium of claim 1 wherein synchronizing the plurality of
- 2 signals comprises adding a set of stuffing bits to the plurality of signals.
- 1 4. The machine-readable medium of claim 1 wherein the deframing the plurality of
- 2 signals comprises:
- 3 cycling through each of the plurality of signals; and
- 4 deframing each of the plurality of signals in a cycle.
- 5. A machine-readable medium that provides instruction, which when executed by a set
- of processors, cause said set of processors to perform operations comprising:
- 3 receiving a first and second signal at a first and second clock rate;
- 4 multiplexing the first and second signal; and
- 5 deframing the multiplexed first and second signal.
- 6. The machine-readable medium of claim 5 wherein the first and second clock rate are
- 2 the same clock rate.

- The machine-readable medium of claim 5 wherein the multiplexing is in accordance
- 2 with a third clock rate, the third clock rate being greater than the sum of the first and second
- 3 clock rate.
- The machine-readable medium of claim 5 further comprising synchronizing the first
- and second signal to a third clock rate before multiplexing the first and second signal.
- 1 9. A machine-readable medium that provides instruction, which when executed by a set
- of processors, cause said set of processors to perform operations comprising:
- 3 receiving a first signal at a first rate;
- 4 receiving a second signal at a second rate;
- 5 synchronizing the first and second signal to a third rate;
- 6 multiplexing the synchronized first and second signal; and
- deframing the multiplexed first and second signal.
- 1 10. The machine-readable medium of claim 9 wherein the first rate and the second rate
- 2 are approximately equal, a sum of the first and second rate being less than the third rate.
- 1 11. The machine-readable medium of claim 9 wherein the third rate is faster than the sum
- 2 of the first and second rate.
- 1 12. The machine-readable medium of claim 9 wherein the synchronizing the first and
- 2 second signal comprises adding a set of stuffing bits to the first and second signal.
- 1 13. An apparatus comprising:
- a first and second receiving unit to receive a first and second signal;

3		a multiplexing unit coupled to the first and second receiving unit, the multiplexing
4		unit to multiplex the first and second signal;
5		a deframing unit coupled to the multiplexing unit, the deframing unit to deframe the
6		multiplexed first and second signal from a format.
1	14.	The apparatus of claim 13 wherein the first and second signals are received at a first
2		econd rate.
۷	and so	cond rate.
1	15.	The apparatus of claim 13 wherein the first and second signals are received at a first
2	rate.	
1	16.	The apparatus of claim 13 further comprising:
2		a domain clock to transmit a clock signal;
3		the first and second receiving unit coupled to the domain clock, the first and second
4		receiving unit to synchronize the first and second signal to the clock signal,
5		the domain clock being faster than a sum of a first rate of the first signal and a
6		second rate of the second signal.
1	17.	The apparatus of claim 13 further comprising:
2		a selecting unit coupled to the deframing unit, the selecting unit to select either the
3		first or second signal and to transmit the selected first or second signal;
4		a second multiplexing unit coupled to the selecting unit, the multiplexing unit to
5		multiplex the selected first or second signal and a third signal;
6		a third receiving unit coupled to the second multiplexing unit, the third receiving unit
7		to receive the third signal and transmit the third signal to the second
Q		multiplexing unit

9		a second deframing unit coupled to the multiplexing unit, the second deframing unit
10		to deframe the multiplexed third signal and the selected first or second signal
11		from a second format.
1	18.	An apparatus comprising:
2		a domain clock to transmit a clock signal;

- a first and second receiving unit coupled to the domain clock, the first and second receiving unit to receive a first and second signal and to synchronize the first and second signal to the clock signal;
- a multiplexing unit coupled to the first and second receiving unit, the multiplexing
 unit to multiplex the synchronized first and second signal; and
 a deframing unit coupled to the multiplexing unit, the deframing unit to deframe the
 multiplexed first and second signal from a format.
- 1 19. The apparatus of claim 18 wherein the first and second signals are received at a second and third clock rate, the sum of the second and third clock rate being less than a rate of the clock signal.
- 1 20. The apparatus of claim 18 wherein to synchronize the first and second signal comprises adding a set of stuffing bits to the first and second signal.
- 1 21. The apparatus of claim 18 wherein the clock signal's rate is greater than a sum of the 2 first and second signal's rate.
- 1 22. The apparatus of claim 18 further comprising:
 2 a selecting unit coupled to the deframing unit, the selecting unit to select either the

3 first or second signal and to transmit the selected first or second signal;

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5		multiplex the selected first or second signal and a third signal;
6		a third receiving unit coupled to the second multiplexing unit, the third receiving unit
7		to receive the third signal and transmit the third signal to the second
8		multiplexing unit;
9		a second deframing unit coupled to the multiplexing unit, the second deframing unit
10		to deframe the multiplexed third signal and the selected first or second signal
11		from a second format.
1	23.	An apparatus comprising:
2		a domain clock to transmit a clock signal;
3		a receiving unit coupled to the domain clock, the receiving unit to receive a data
4		signal and to synchronize the data signal to the clock signal, the data signal
5		having a plurality of channels;
6		a first deframing unit coupled to the receiving unit, the first deframing unit to deframe
7		the data signal from a format and to identify the plurality of channels; and
8		a second deframing unit coupled to the first deframing unit, the second deframing unit
9		to cycle through each of the plurality of channels to deframe from a second
10		format.
1	24.	The apparatus of claim 23 wherein the clock signal is faster than the data signal.
1	25.	The apparatus of claim 23 wherein to synchronize the data signal comprises adding a
2	set of	stuffing bits to the data signal.

a second multiplexing unit coupled to the selecting unit, the multiplexing unit to

1	26.	The apparatus of claim 23 further comprising:
2		a second receiving unit coupled to the domain clock, the second receiving unit to
3		receive a second data signal and to synchronize the second data signal to the
4		clock signal;
5		a multiplexing unit coupled to the first deframing unit and the second receiving unit,
6		the multiplexing unit to multiplex the deframed data signal and the
7		synchronized second data signal; and
8		the second deframing unit coupled to the multiplexing unit, the second deframing unit
9		to alternate between deframing the plurality of channels and deframing the
10		second data signal.
1	27.	An apparatus comprising:
2		a domain clock to transmit a clock signal;
3		a first and second receiving unit coupled to the domain clock, the first and second
4		receiving unit to receive a first and second signal and to synchronize the first
5		and second signal to the clock signal;
6		a multiplexing unit coupled to the first and second receiving unit, the multiplexing
7		unit to multiplex the synchronized first and second signal;
8		a first deframing unit coupled to the multiplexing unit, the first deframing unit to
9		deframe the multiplexed first and second signal from a first format; and
10		a second deframing unit coupled to the first deframing unit, the second deframing unit
11		to deframe the multiplexed first and second signal from a second format.
1	28.	The apparatus of claim 27 wherein the first and second signals are transmitted at a
2	first a	nd second rate, the clock signal's rate being greater than a sum of the first and second
3	rate.	

- 1 29. The apparatus of claim 27 wherein the clock signal's rate is greater than a sum of the rate of the first and second signal.
- 1 30. The apparatus of claim 27 wherein to synchronize the first and second signal
- 2 comprises adding a set of stuffing bits to the first and second signal.
- 1 31. An apparatus comprising:
- a domain clock to transmit a clock signal;
- a first receiving unit coupled to the domain clock, the first receiving unit to receive a
- first signal at a first rate and to synchronize the first signal to the clock signal;
- a second receiving unit coupled to the domain clock, the second receiving unit to
- 6 receive a second signal at a second rate and to synchronize the second signal
- 7 to the clock signal;
- a first deframing unit coupled to the first receiving unit, the first deframing unit to
- deframe the first signal from a first format;
- a multiplexing unit coupled to the first deframing unit and the second receiving unit,
- the multiplexing unit to multiplex the deframed first signal and the second
- signal; and
- a second deframing unit coupled to the multiplexing unit, the second deframing unit
- to deframe the multiplexed deframed first signal and the second signal from a
- second format.
- 1 32. The apparatus of claim 31 wherein the clock signal's rate is greater than a sum of the
- 2 first and second rate.
- 1 33. The apparatus of claim 31 wherein the second signal is a set of signals.

- 1 34. The apparatus of claim 31 wherein the synchronize the first and second signal
- 2 comprises adding a set of stuffing bits to the first and second signal.
- 1 35. A computer implemented method comprising:
- 2 receiving a plurality of signals at a first clock rate;
- 3 synchronizing the plurality of signals to a second clock rate; and
- 4 deframing the plurality of signals.
- 1 36. The computer implemented method of claim 35 wherein the second clock rate is
- 2 greater than twice the first clock rate.
- 1 37. The computer implemented method of claim 35 wherein synchronizing the plurality
- of signals comprises adding a set of stuffing bits to the plurality of signals.
- 1 38. The computer implemented method of claim 35 wherein the deframing the plurality
- 2 of signals comprises:
- 3 cycling through each of the plurality of signals; and
- deframing each of the plurality of signals in a cycle.
- 1 39. A computer implemented method comprising:
- 2 receiving a first and second signal at a first and second clock rate;
- 3 multiplexing the first and second signal; and
- deframing the multiplexed first and second signal.
- 1 40. The computer implemented method of claim 39 wherein the first and second clock
- 2 rate are the same clock rate.

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- 1 41 The computer implemented method of claim 39 wherein the multiplexing is in
- 2 accordance with a third clock rate, the third clock rate being greater than the sum of the first
- 3 and second clock rate.
- 1 42. The computer implemented method of claim 39 further comprising synchronizing the
- 2 first and second signal to a third clock rate before multiplexing the first and second signal.
- 1 43. A computer implemented method comprising:
- 2 receiving a first signal at a first rate;
- receiving a second signal at a second rate;
- 4 synchronizing the first and second signal to a third rate;
- 5 multiplexing the synchronized first and second signal; and
- 6 deframing the multiplexed first and second signal.
- 1 44. The computer implemented method of claim 43 wherein the first rate and the second
- 2 rate are approximately equal, a sum of the first and second rate being less than the third rate.
- 1 45. The computer implemented method of claim 43 wherein the third rate is faster than
- 2 the sum of the first and second rate.
- 1 46. The computer implemented method of claim 43 wherein the synchronizing the first
- 2 and second signal comprises adding a set of stuffing bits to the first and second signal.

Attorney Docket No.: 04906.P074

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